

*Demodex equi*, Raill.

♀.—This species is much wider than is usually the case in the genus, the width (in mounted specimens) being about a third of the total length of the body. Cephalothorax + capitulum longer than abdomen; the latter has the posterior end widely rounded off or else bluntly pointed. Capitulum distinctly wider than long; the two rods on its dorsal surface are not very long, but stout and blunt at the end.

*Measurements*.—Length of body (including capitulum) 200–220  $\mu$ , its width 68–70  $\mu$ .

*Material*.—I have examined two adult female examples of this species from English horses (Leslie Linzell's collection).

This *Demodex* causes a definite skin disease in horses.

EXPLANATION OF PLATE IX.

Fig. 1. *Demodex ratti*, Hahn. Ventral aspect.

Fig. 2. — *musculi*, Oudemans, nymph. Ventral aspect.

Fig. 3. — —, female. Ventral aspect.

XXV.—*Descriptions and Records of Bees*.—LXXVI.

By T. D. A. COCKERELL, University of Colorado.

*Hoplitis anodontura*, sp. n.

♂.—Length about 10 mm.; anterior wing 7.

Robust, black, with mostly white hair, but on vertex, disc of mesothorax, and abdominal segments 2 to 4 (except the apical bands) it is pale ochreous; facial quadrangle longer than broad, face densely covered with white hair; antennæ short, looking like those of a female, the flagellum red beneath except at base; vertex and cheeks with strong dense punctures, but shining between the punctures; mesothorax and scutellum very densely punctured; area of metathorax polished and shining; tegulae shining black. Wings strongly infuscated, brownish, the b.n. meeting t.m., and second s.m. long. Legs black, punctured, with glittering white hair; inner side of tarsi with pale reddish hair. Abdomen shining, but very well punctured; segments 1 to 5 with entire, narrow, white hair-bands; sixth segment very broadly rounded and at sides obtusely angulate, but not toothed.

Mexico (C. F. Baker Collection, 2499).

Compared with *H. adunca*, the type of the genus, this

species differs principally as follows:—Sixth abdominal segment without lateral teeth; flagellum normal, not especially thickened; mesothorax more coarsely and densely punctured; hind femora and tibiae stouter. There is no material difference in the venation. The species is more like the European *H. adunca* than the species of the United States.

*Pasiphaë cyanea melanura*, subsp. n.

♀.—No red hair at end of abdomen, that on each side of apical plate greyish black (sooty); tegulae shining black. Wings quite dusky.

Chubut, Patagonia (from W. F. H. Rosenberg). U.S. National Museum. The typical form is from Tierra del Fuego, about 600 miles southward.

*Nomada carcaranensis*, sp. n.

♂.—Length 10 mm.

Robust, with white pubescence in supraclypeal region, on sides and posterior part of thorax, and underside of abdomen. Head bright ferruginous, with the clypeus, very large cuneiform lateral marks, malar space, and base of mandibles light lemon-yellow; face broad, inner orbits practically parallel; mandibles simple; labrum red, very hairy; eyes pale reddish grey; face and front with coarse punctures, but a smooth line down middle of clypeus; scape bright ferruginous; flagellum ferruginous, strongly suffused with blackish above, except at base; third antennal joint much longer than fourth, but not quite so long as fourth and fifth combined; region of ocelli blackened; mesothorax red, with a strong median channel, which is blackish; surface of mesothorax shining, with very large, irregular, partly confluent punctures; axillae and the bilobed scutellum brighter red than mesothorax; yellow band on prothorax, and the tubercles, two spots on pleura, and line on postscutellum also pale yellow; sides of thorax blackened, but middle of mesopleura red; metathorax red, with the basal area black; tegulae bright ferruginous, with scattered punctures. Wings brown, with a median hyaline area; nervures dark fuscous, stigma ferruginous; b. n. meeting t. m.; second s. m. large, quadrate, receiving first r. n. slightly beyond middle. Abdomen shining, finely punctured; first segment basally red, then reddish black, and the margin with a yellow band; remaining segments reddish black, the second with a pale yellow band, broad at sides and narrow in middle, the third with only a slight mark on each

side, the fourth to sixth with pale bands, on fourth slightly interrupted, on fifth entire, on sixth widely interrupted, and emarginate on each side anteriorly; apical plate broad, truncate, finely longitudinally striate; venter without yellow markings.

Carcarana, Argentina (*L. Bruner*, 66).

Related to *N. pampicola*, Holmberg., but much larger, with red head and thorax. The type is in U.S. National Museum.

*Nomada barcelonensis*, nom. nov.

*Nomada excellens*, Pérez, 1913 (not Ckll. 1903).

Barcelona, Spain.

*Augochlora (Odontochlora) thetis* (Schrottky).

San Bernardino, Paraguay (*K. Fiebrig*). Collected Nov. 2.

*Diadasia imitatrix* (Schrottky).

San Bernardino, Paraguay (*K. Fiebrig*).

*Megachile stomatura*, sp. n.

♂.—Length about 8.5 mm.

Rather narrow, with nearly parallel-sided but not much elongated abdomen. Black, the small joints of tarsi ferruginous, and anterior femora with a large, polished, shining, ferruginous surface on inner side, occupying about the apical two-thirds. Head broader than thorax; face (except upper part of clypeus) and cheeks covered with white hair, that on face faintly yellowish; clypeus with rather large punctures on a shining ground; maxillary palpi very short; antennæ long and slender, reaching extreme base of abdomen; flagellum obscurely brown beneath; metathorax and sides of thorax with long white hair, dorsal surface with little hair, on mesothorax short, thin, and brown, but there is a band of white hair on postscutellum, a thin band in scutello-mesothoracic suture, and a conspicuous white tuft on each side of mesothorax posteriorly; mesothorax and scutellum dullish, the former with small weak punctures, distinctly separate on disc; tegulæ piceous, reddened posteriorly. Wings brownish hyaline, with a dark cloud from region of stigma along marginal cell to apex, darkest at end of marginal cell. Anterior coxæ without spines; anterior tarsi simple; hind tibiæ posteriorly covered with white tomentum, conspicuous in an

oblique light. Abdomen shining, basal transverse depressions of second and third segments very deep; segments 1 to 5 with narrow, entire, white hair-bands; fifth segment with short but coarse black hair before the band; sixth segment dorsally rugose, not tomentose, but with erect black hairs, the apical keel strongly bilobed, the large subtriangular lobes convex on outer margin and slightly concave within, the whole suggesting the opened mouth of some bird or fish; no subapical ventral armature.

Trinidad, West Indies, June 6 (*Aug. Busck*). U.S. National Museum.

A very distinct little species, superficially like *M. multidentis*, Fox, from Jamaica, but structurally quite different. The obscure reddish stigma is quite well developed, whereas that of *multidentis* is obsolete. The real affinity seems to be with such species as *M. disparipennis*, Ckll., from Texas, and *M. perpunctata*, Ckll., from Mexico. These latter have the darkening of the marginal cell and adjacent parts much more intense.

*Megachile holomelena*, sp. n.

♀.—Length 12 mm.; anterior wing 8 mm.

Black, robust, the body and pubescence entirely black, the flagellum very obscurely brownish beneath; mandibles broad, obtusely quadridentate; clypeus short and broad, densely punctured but glistening, the lower margin in middle smooth and polished, the edge straight and without any denticle; supraclypeal area smooth and shining in middle; mesothorax very finely and closely punctured, not shining; scutellum shining on disc, but well punctured; tegulæ black. Wings brownish hyaline, a dark shade along costal side of marginal cell. Spurs of anterior tibiæ red. Abdomen shining, last ventral segment truncate-subemarginate.

Chubut, Patagonia (from W. F. H. Rosenberg). U.S. National Museum.

The hair on inner side of tarsi is black, not red as in *M. chubutana*, Schrottky. The insect is smaller than *M. melancholica*, Joerg., the wings are not yellowish, and the abdomen is much more hairy dorsally, especially toward the base.

*Megachile atramentata*, sp. n.

♀.—Length 12 mm.; anterior wing 9 mm.

Black, robust, the body, antennæ, and tegulæ wholly black; the pubescence black, very obscurely reddish on inner

side of tarsi; appearance exactly like *M. holomelena*, but differing thus:—Lower margin of clypeus slightly crenulate; median line of clypeus in middle shining, more or less free from punctures; punctures of clypeus more distinct; mesothorax with much larger punctures, well separated on disc posteriorly. Wings darker, especially the upper part of marginal cell; second s.m. larger; b. n. almost meeting t.-m.

Bahia Blanca, Argentina (*L. Bruner*, 4). U.S. National Museum.

The abdominal scopa is pure black, not brown-black as in *M. chubutana*.

The following key separates five black species which look very much alike:—

- |  |                                  |
|--|----------------------------------|
| Hair of face (male) pure white except at sides; abdomen closely punctured .... | <i>piurensis</i> , Ckll. (Peru.) |
| Hair of face (females only known) without any white .....                      | 1.                               |
| 1. Ventral scopa light orange-fulvous except at apex .....                     | <i>huascari</i> , Ckll. (Peru.)  |
| Ventral scopa black, whitish in middle; mesothorax entirely dull .....         | <i>eulalie</i> , Ckll. (Peru.)   |
| Ventral scopa wholly black .....   | 2.                               |
| 2. Mesothorax with dense very fine punctures.                                  | <i>holomelena</i> , Ckll.        |
| Mesothorax with large well-separated punctures on disc posteriorly .....       | <i>atramentata</i> , Ckll.       |

*Megachile bruneriella*, sp. n.

♂.—Length 10.5 mm.

Rather broad, but parallel-sided; black, including the legs and the long slender antennæ; face densely covered with cream-coloured hair; underside of head with long white hair; vertex with black hair; mesothorax mostly dull, but shining on disc, closely but rather weakly punctured; scutellum closely punctured, but glistening; mesothorax above with long hair, mostly white, but black on disc of mesothorax and most of scutellum; pleura with black hair, but venter with white, and a tuft of white close to base of wings; metathorax with black hair, but postscutellum with white; tegulæ piceous. Wings strongly suffused with brown. Anterior femora with a red area on inner surface; anterior tibiæ reddened behind; anterior tarsi obscurely reddish, rather robust, not modified, with a posterior white fringe a little longer than width of tarsi; anterior coxæ with very short pointed spines; middle tarsi with shining creamy-white hair on outer side and long hairs behind; hind tarsi with red hair on inner side. Abdomen short, the sixth segment vertical; first segment with long whitish hair, the others with ochreous

hair (no black), the second with pale ochreous bands at sides, the third with similar bands less widely interrupted, the fourth with an entire pale band, the fifth covered with pale reddish hair, the sixth with creamy appressed hair; keel of sixth segment broadly rounded, the margin irregularly subcrenate but not dentate, the central emargination moderate; no ventral spines.

Carcarana, Argentina (*L. Bruner*, 44). U.S. National Museum.

In the tables of Jörgensen and Schrottky it runs nearest to *M. parsonsiæ*, from which it differs by the small coxal spines, non-dentate end of abdomen, &c. It runs out at 13 in Vachal's table, and in Friese's Argentine table it goes to "*M. simillima*" = *parsonsiæ*. It is related to *M. paraxanthura*, Ckll., but differs in the distribution of the hair on the abdomen and the dark spurs. Other species of *Megachile* taken by Bruner at Carcarana are *M. infima*, Vachal (69); *M. ctenophora*, Holmbg., apparently (70); *M. gomphrenæ*, Holmbg., apparently (45); *M. vagata*, Vachal (43); *M. mendozaana*, Ckll. (63). The *Megachile* fauna of Argentina is very large, and as many of the species have been briefly described and many are known only from one sex, the determination of the species is more or less difficult and uncertain. The species must be quite local in many cases; thus, Vachal described nine species from the Province of Mendoza, and Jörgensen subsequently reported twenty species from that province, but did not meet with any of Vachal's.

*Xylocopa frontalis nitens* (Lepelletier).

*Apis morio*, Fabr., 1793, is preoccupied by *Apis morio*, Swed., 1787; the insect consequently takes the name *nitens* (*Xylocopa nitens*, Lep., 1841).

*Agapostemon heterurus*, sp. n.

♀.—Length about 10 mm.; anterior wing 7.8 mm.

Head and thorax a rather bluish green, the strongly striate cheeks steel-blue; face broad, eyes emarginate; mandibles pale yellow basally; clypeus black except basally, convex, punctured, with a deep median sulcus; supraclypeal area varying from brassy to bluish; flagellum ferruginous beneath; mesothorax and scutellum covered with short, felt-like, ferruginous hair; base of metathorax coarsely wrinkled, the triangular area distinguishable; posterior face coarsely transversely grooved; tegulae reddish brown. Wings dusky, especially at apex; first r.n. joining second s.m. about



beginning of last third. Legs black, the anterior and middle knees and anterior tibiæ in front pallid; hind tibiæ and tarsi with dark fuscous hair on outer side and shining pale yellowish on inner; hind spur with two lamelliform teeth, the first very large. Abdomen honey-colour, with transverse black bands across middle of segments, that on first sometimes incomplete, the first also with two dusky spots anteriorly and a dark mark on each side; apical part of segments 2 to 4 with appressed orange hair; caudal rima yellowish, but black hair on each side of it.

Palcazu, Peru (from Rosenberg). U.S. National Museum.

Related to *A. vulpicolor*, Crawford, but the abdomen is quite differently coloured and the base of metathorax is much more coarsely sculptured.

*Agapostemon tyleri*, sp. n.

Almost exactly like *A. viridulus*, Fabr., in nearly all characters, and running to that in published tables, but distinct in the following characters:—

♀ (type).—Tegulæ black, with a yellow mark in front; scutellum finely and closely punctured all over; base of metathorax behind sides of enclosure without distinct grooves or striæ directed meso-caudad.

♂.—Tegulæ chestnut-red, with a yellow spot; yellow band on first abdominal segment broadly interrupted; hind femora and tibiæ on upper (inner) side broadly banded with black for their whole length; anterior tibiæ mainly black behind.

San Juan Allende, Mexico, Nov. 29 (*C. H. T. Townsend*). U.S. National Museum.

XXVI.—Notes on the Braconidæ in the British Museum.—I.

By ROWLAND E. TURNER, F.Z.S., F.E.S.

Subfamily BRACONINÆ.

*Chaoilta decorata*, Szép.

*Blastomorpha decorata*, Szép. Term. Füzetek, xxiii. p. 50 (1900).

*Chaoilta decorata*, Szép. Wytzman's Genera Insect. xxii. p. 17 (1904).

This species was originally described from Dutch New Guinea. I took a specimen at Cooktown in November 1904.